The Difficult CS:
OBESITY

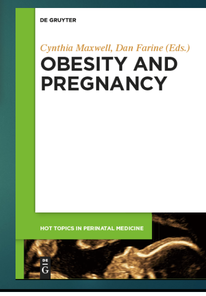
1

SOGC CLINICAL PRACTICE GUIDELINE

It is SOGC policy to review the content 5 years after publication, at which time the document may be re-affirmed or revised to reflect emergent new evidence and changes in practice.

No. 392, November 2019 (Replaces No. 239, February 2010)

Guideline No. 392-Pregnancy and Maternal Obesity Part 2: Team Planning for Delivery and Postpartum Care



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Obesity in Pregnancy

- 30% of Canadians reported a BMI ≥30 in 2015
  - This was 17% in 2007-2008
- Not all obese patients are "unhealthy"
- There are significant genetic and socioeconomic determinants of obesity
- Working to reduce stigma and promote inclusivity is very important

Table 4. World Health Organization classification of body mass index (BMI)[19]

BMI kg/m^2	Classification
<18.5	Underweight
18.5–24.99	Normal weight
25.00–29.99	Overweight
≥30.00	Obese
30.00–34.99	Obese class I
35.00–39.99	Obese class II
≥40.00	Obese class III

- Maternal risks: gestational diabetes, hypertension, preeclampsia, thromboembolism, obstetric interventions including induction of labour and Caesarean section
- 50% of maternal deaths occur in obese patients
- Perinatal risks: stillbirth, macrosomia, shoulder dystocia, meconium aspiration, NICU admission

3

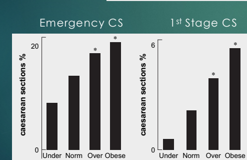
Increased rates of CS

DOI: 10.1111/j.1471-0528.2006.01233.x
www.blackwellpublishing.com/bjog
General obstetrics

Poor uterine contractility in obese women

J Zhang,[a] L Bricker,[b] S Wray,[a] S Quenby[c]

[a] Department of Physiology, University of Liverpool, Liverpool, UK [b] Liverpool Women's Hospital NHS Trust, Liverpool, UK
[c] School of Developmental and Reproductive Medicine, University of Liverpool, UK
Correspondence: Dr S Quenby, First Floor, Liverpool Women's Hospital, Crown Street, Liverpool, L8 7SS, UK. Email squenby@liv.ac.uk



- Controlled for IOL
- More CS in both:
  - 1st stage labour
  - 2nd stage labour

4

Decision to delivery time at CS

BMJ Open **Associations between maternal size and health outcomes for women undergoing caesarean section: a multicentre prospective observational study (The MUM SIZE Study)**

Alicia Therese Dennis,[1,2] Karen Elaine Lamb,[3,4] David Story,[5] Michelle Tew,[6]

Comparative Study > J Obstet Gynaecol Can. 2015 Nov;37(11):988-94.
doi: 10.1016/s1701-2163(16)30048-2.

Emergency Caesarean Section in Obese Parturients: Is a 30-Minute Decision-to-Incision Interval Feasible?

Katherine J Pulman[1], Mina Tohidi[2], Jessica Pudwell[2], Gregory A L Davies[2]

- Decision-to-delivery interval increased by an average of 4.5 minutes for patients with obesity vs normal weight controls
- Mainly associated with transportation and anesthesia
- BMI ≥45 required ~20 minutes of additional OR time compared with normal BMI
- Each 1 kg/m2 increase in BMI increased surgical time by ~0.3 minutes

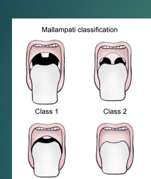
5

General anesthesia?

Review > Acta Anaesthesiol Scand. 2008 Jan;52(1):6-19.
doi: 10.1111/j.1399-6576.2007.01483.x.

Obstetric anesthesia for the obese and morbidly obese patient: an ounce of prevention is worth more than a pound of treatment

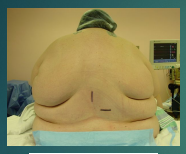
Mieke A Soens[1], David J Birnbach, Jayanthie S Ranasinghe, André van Zundert

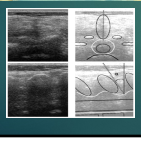


- Difficult airway
- Airway edema
- Aspiration risk
- Heavier chest wall
- Ventilatory pressure
- Faster desaturation

6

Spinal or epidural?

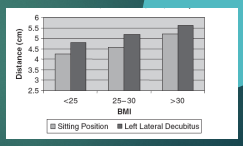




> J Clin Anesth. 1995 Feb;7(1):1-4. doi: 10.1016/0952-8180(94)00018-y.

Parturient's posture during epidural puncture affects the distance from skin to epidural space

J Hamza [1], M Smida, D Benhamou, S E Cohen



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The Operating Room

- Most standard OR tables have 500lb limits
- May require 2 tables or extenders
- Use a HoverMatt
- Arterial lines
- Extra large BP cuff
- Additional surgeons/assistants

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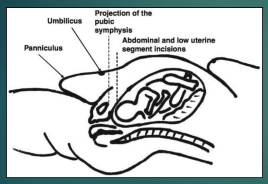
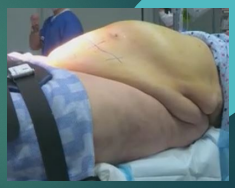
Different incision?





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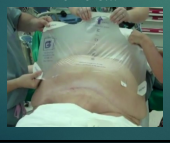
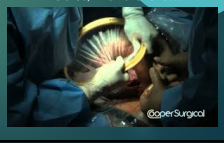
Retraction

Traxi etc…

Mobius, Alexis O etc…





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How to reduce wound complications?

- Cefazolin 3g IV
- Meticulous technique and hemostasis
- Wound washout to remove debris / non-viable adipose
- Change gown/gloves for closure
- Sub-cutaneous closure to eliminate dead space
  - Suture if >2 cm depth, 2-0 Caprosyn, sometimes 3+ layers
- Single use negative Pressure Wound Therapy

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TVASURG

https://pie.med.utoronto.ca/TVASurg/

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The Difficult CS:

PLACENTA ACCRETA SPECTRUM

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SOGC CLINICAL PRACTICE GUIDELINE

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No. 383, July 2019

No. 383-Screening, Diagnosis, and Management of Placenta Accreta Spectrum Disorders

This Clinical Practice Guideline has been prepared by the authors and reviewed by the Society of Obstetricians and Gynaecologists of Canada (SOGC)'s Maternal Fetal Medicine; Diagnostic Imaging and Guideline Management and Oversight committees and approved by the Board of the SOGC.

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Johanne Dube, MD, Mont-Royal, QC; Phyllis Glanc, MD, Toronto, ON; Venu Jain, MD, Edmonton, AB; Kenneth I. Lim, MD, Vancouver, BC; Ori Nevo (co-chair), MD, Toronto, ON; Candace O'Quinn, MD, Calgary, AB; Natasha Simula, MD, Vancouver, BC; Mila Smithies, MD, Ottawa, ON

Disclosure statements have been received from all authors.

Key Words: placenta, previa, accreta, increta, percreta, invasive placenta, ultrasound, power Doppler, color Doppler, magnetic resonance imaging, cystoscopy, internal iliac artery ligation, interventional radiology, Caesarean hysterectomy

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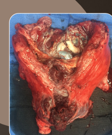
Background

Irving, Frederick C., and Hertig, Arthur T.: A Study of Placenta Accreta, Surg. Gynec. Obst. 64: 178, 1937.

- Major **obstetric** & largely **iatrogenic** problem
- Becoming **more common**, a 20th/21st century disease
- Increased maternal & fetal **burden of disease**
- Significant **psycho-social** effects
- May or may not be diagnosed **before delivery**
- Need a high **index of suspicion** to screen/diagnose adequately
- Significant **resources & expertise**
- Cause of significant **stress** in all stakeholders



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Original Research ajog.org

OBSTETRICS 612.e1 American Journal of Obstetrics & Gynecology JUNE 2017

Multidisciplinary team learning in the management of the morbidly adherent placenta: outcome improvements over time

Alireza A. Shamshirsaz, MD; Karin A. Fox, MD, MEd; Hadi Erfani, MD, MPH; Steven L. Clark, MD; Bahram Salmanian, MD; B. Wycke Baker, MD; Michael Coburn, MD; Amir A. Shamshirsaz, MD; Zhoobin H. Bateni, MD; Jimmy Espinoza, MD; Ahmed A. Nassr, MD; Edwina J. Popek, DO; Shiu-Ki Hui, MD; Jun Teruya, MD, DSc; Celestine Shauching Tung, MD, MPH; Jeffery A. Jones, MD; Martha Rac, MD; Gary A. Dildy, MD; Michael A. Belfort, MD, PhD

J Obstet Gynaecol Can 2013;35(5):417–425

MAY JOGC MAI 2013

Multidisciplinary Management of Invasive Placenta Previa

Melissa G. Walker, MSc,[1,2] Lisa Allen, MD, FRCSC,[1,2] Rory C. Windrim, MB, FRCSC,[1,2] John Kachura, MD, FRCPC,[1,3] Lindsay Pollard, RN,[1,2] Sophia Pantazi, MD, FRCPC,[1,4] Sarah Keating, MD, FRCPC,[1,5] Jose C.A. Carvalho, MD, PhD,[1,6] John C.P. Kingdom, MD, FRCSC

Maternal Morbidity in Cases of Placenta Accreta Managed by a Multidisciplinary Care Team Compared With Standard Obstetric Care

OBSTETRICS & GYNECOLOGY VOL. 117, NO. 2, PART 1, FEBRUARY 2011

Alexandra G. Eller, MD, MPH, Michele A. Bennett, MD, Margarita Sharshiner, MD, Carol Masheter, PhD, Andrew P. Soisson, MD, Mark Dodson, MD, and Robert M. Silver, MD

RESEARCH ajog.org

OBSTETRICS 218.e1 American Journal of Obstetrics & Gynecology FEBRUARY 2015

Maternal morbidity in patients with morbidly adherent placenta treated with and without a standardized multidisciplinary approach

Alireza A. Shamshirsaz, MD; Karin A. Fox, MD; Bahram Salmanian, MD; Concepcion R. Diaz-Arrastia, MD; Wesley Lee, MD; B. Wycke Baker, MD; Jerasimos Ballas, MD; Qian Chen, MD; Teelkien R. Van Veen, MD; Pouya Javadian, MD; Haleh Sangi-Haghpeykar, PhD; Nicholas Zacharias, MD; Stephen Welty, MD; Christopher I. Cassady, MD; Amirhossein Moaddab, MD; Edwina J. Popek, DO; Shiu-ki Rocky Hui, MD; Jun Teruya, MD, DSc; Venkata Bandi, MD; Michael Coburn, MD; Thomas Cunningham, RN; Stephanie R. Martin, MD; Michael A. Belfort, MD, PhD

ELSEVIER Available online at www.sciencedirect.com ScienceDirect

Taiwanese Journal of Obstetrics & Gynecology 50 (2011) 114–117

www.tjog-online.com

Research Letter

Multidisciplinary approach in management of placenta accreta

Sedigheh Hantoushzadeh[a,b,*], Hadi Rokni Yazdi[c], Sedigheh Borna[a], Soghra Khazardoust[a], Akram Ghahghaei Nezamabadi[a], Abolfazl Mahdanian[d], Seyed Mehran Vaziri Bozorg[c], Ahmadreza Ghasemi Esfe[c], Narges Ashrafinia[d], Mamak Shariat[a], Mina Jafarabadi[b]

J Obstet Gynaecol Can 2012;34(4):320–324

APRIL JOGC AVRIL 2012

A Multidisciplinary Checklist for Management of Suspected Placenta Accreta

Amira El-Messidi, MD, FRCSC,[1] Angela Mallozzi, MD, FRCSC, FACOG,[1] Lawrence Oppenheimer, MD, FRCSC, FRCOG[2]

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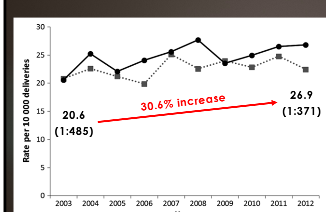
More common than you think…



AOGS ORIGINAL RESEARCH ARTICLE

Maternal and neonatal outcomes following abnormally invasive placenta: a population-based record linkage study

HEATHER J. BALDWIN[1,2], JILLIAN A. PATTERSON[1,3], TANYA A. NIPPITA[1,3,4], SIRANDA TORVALDSEN[1,3,5], IBINABO IBIEBELE[1,3], JUDY M. SIMPSON[6] & JANE B. FORD[1,3]

- Overall rate of IP was 24.8 per 10,000 (1:403)

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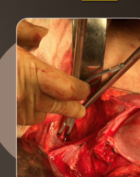
Maternal Outcomes

- Associated with poor maternal outcomes:
  - Overall maternal morbidity
  - Hemorrhage: median blood loss 2500-7800 mL
  - Blood transfusion: 40% massive transfusion >10u
  - Visceral/vascular injury
  - Hysterectomy
  - Maternal ICU admission
  - Length of stay
  - Readmission to hospital
- Mortality remains low in high-resource countries



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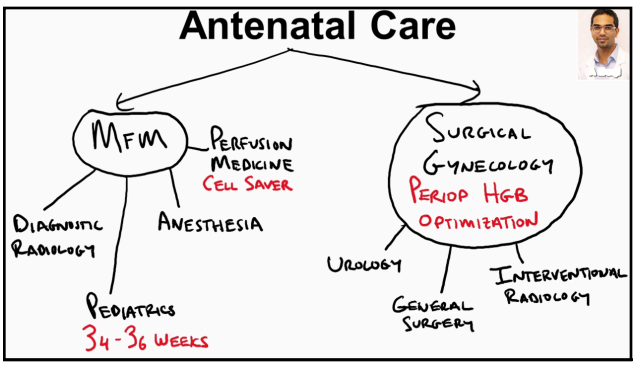

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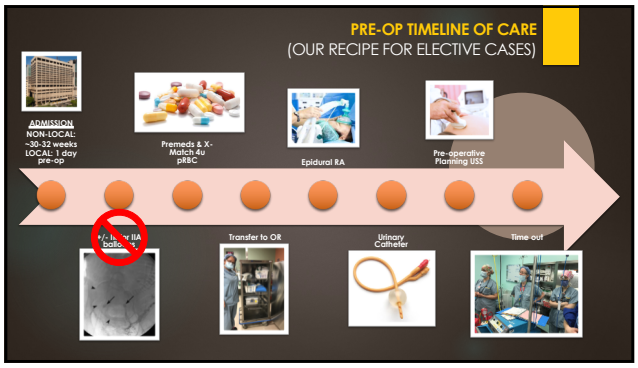

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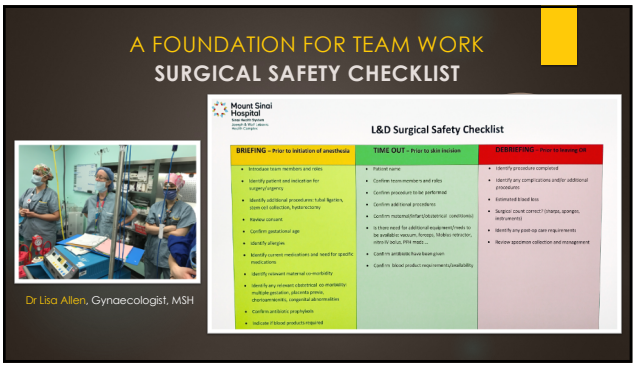

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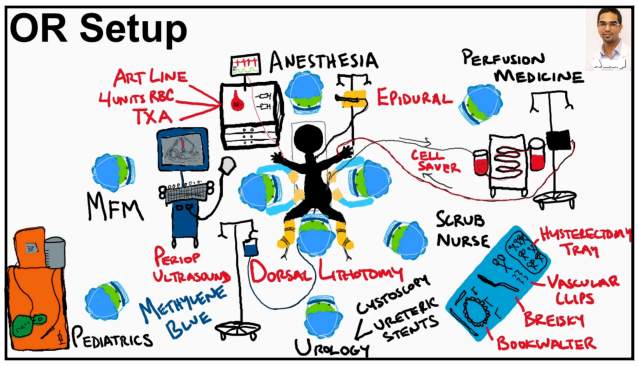

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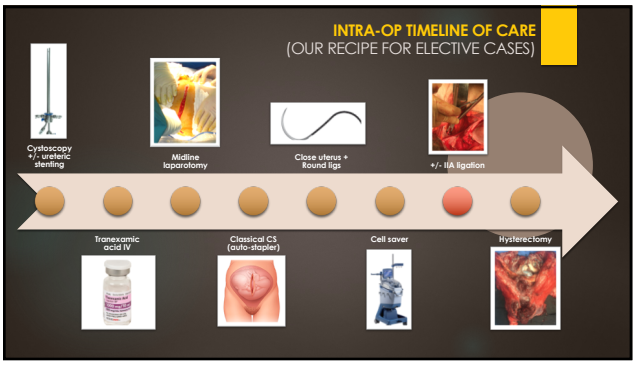

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POST-OP TIMELINE OF CARE
(OUR RECIPE FOR ELECTIVE CASES)
Sponge weighs & EBL
+/- ICU
+/- Postpartum ward
Debriefing
Post-operative 6w check

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Emergency cases
"Mobile" Medicine: A Surprise Encounter with Placenta Percreta
HELP WANTED

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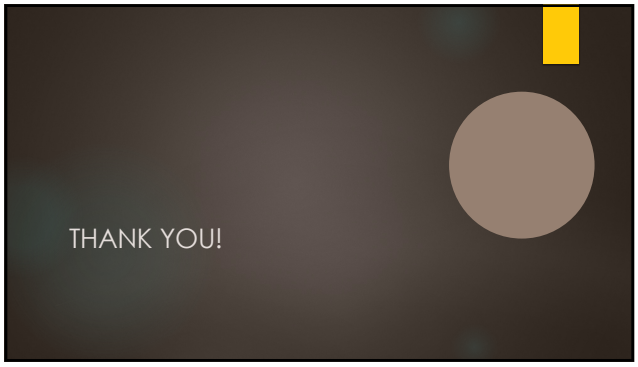
THANK YOU!

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